

REMARKS

Administrative Overview

Claims 24, 26–34, 36–38, 40–44, 46, 47, and 49-52 were examined in the Office action of July 5, 2006. The Office action rejects claims 24, 26–31, 36–38, 40, 41, 46, 47, and 49-52 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,452,723 (**Wu**) in view of U.S. Patent No. 6,571,118 (**Utzinger**). The Office action also rejects claims 32-34 and 42-44 under 35 U.S.C. § 103(a) as allegedly being unpatentable over **Wu** in view of **Utzinger** and further in view of U.S. Patent No. 5,999,844 (**Gombrich**).

Applicants respectfully traverse these rejections, as explained herein. Applicants amend dependent claim 51 to correct a grammatical error; no new matter is added thereby.

Following entry of this paper, claims 24, 26–34, 36–38, 40–44, 46, 47, and 49-52 will still be pending.

Claims 24, 26–31, 36–38, 40, 41, 46, 47, and 49-52 are patentable over **Wu** in view of **Utzinger**

None of the cited art, alone or in combination, teaches or suggests screening a specimen for a given condition using fluorescence spectral data with illumination at one excitation wavelength, and, where the result is not determinate, using reflectance spectral data to classify the specimen.

Thus, none of the cited references, alone or in combination, teach or suggest the combined elements of either of independent claims 24 or 38; and, therefore, claims 24 and 38 are patentable in light of the art. Likewise, because a dependent claim includes all the limitations of the independent claim from which it depends, Applicants assert that all pending dependent claims are patentable in light of the art.

Wu appears to teach “applying a diffuse reflectance spectrum to a fluorescence spectrum” to correct fluorescence data obtained from thick samples so that the resulting fluorescence spectrum is the same as would be obtained from thin (10 μ m) tissue slices -- see col. 3, lines 1-12, of **Wu**, reproduced below:

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The photon migration picture is extended to model the fluorescence from turbid media such as human tissue. The photon migration approach suggests that the distortion in a fluorescence spectrum caused by the interplay of scattering, absorption, geometry and boundary conditions can be precisely removed by measuring the diffuse reflectance spectrum over the same wavelength range and in the same manner as the fluorescence spectrum, and applying this diffuse reflectance spectrum to the fluorescence spectrum in a well defined manner. The result is the same intrinsic fluorescence spectrum as would be obtained from thin (10 μ m) tissue slices which are not distorted by these factors.

Wu does not teach or suggest using reflectance spectral data itself to classify a test specimen. Instead, **Wu** teaches “applying a diffuse reflectance spectrum to a fluorescence spectrum” in order to remove scattering effects. For example, **Wu** states at column 3, lines 3-7, “..the distortion in a fluorescence spectrum caused by the interplay of scattering, absorption, ... can be precisely removed by measuring the diffuse reflectance spectrum ...[emphasis added].” Thus, **Wu** teaches away from use of the reflectance data itself in a tissue classification scheme (the effect of light scattering evidenced by diffuse reflectance spectra is removed).

Also, **Wu** does not teach screening a plurality of test specimens for a first known condition using fluorescence spectral data and then, “for at least one of said plurality of test specimens for which said screening step is not determinate of said test specimen having said first known condition ... classifying said test specimen based at least in part on said processed reflectance spectral data,” as recited in each of independent claims 24 and 38 [emphasis added]. There is no such screening step taught or suggested in **Wu**.

Utzinger does not teach or suggest the steps missing from **Wu**. As discussed in detail in Applicants’ Response dated February 24, 2006, none of the methods in **Utzinger** discloses screening specimens for a given condition using fluorescence data with illumination at one excitation wavelength, and, where the result is not determinate, using reflectance spectral data to classify the specimen.

Therefore, the combination of **Wu** and **Utzinger** does not teach or suggest all of the limitations of either of independent claims 24 and 38, and claims 24 and 38 are patentable in light of the art. Likewise, because a dependent claim includes all the limitations of the independent claim from which it depends, Applicants assert that all pending dependent claims are patentable in light of the art.

Claims 32-34 and 42-44 are patentable over **Wu** in view of **Utzinger** and **Gombrich**

Gombrich does not teach or suggest the elements of either of independent claims 24 or 38 that are missing in **Wu** and **Utzinger**. As discussed in detail in Applicants’ Response dated February 24, 2006, **Gombrich** does not teach or suggest screening specimens for a given condition using fluorescence data with illumination at one excitation wavelength, and, where the result is not determinate, using reflectance spectral data to classify the specimen.

Each of claims 32-34 and 42-44 depends either directly or indirectly from claim 24 or 38, and includes all of the limitations of the respective independent claim. Therefore, claims 32-34 and 42-44 are patentable over the cited art, at least for this reason.

Conclusion


Applicants request that the Examiner reconsider and withdraw the rejections of claims 24, 26-34, 36-38, 40-44, 46, 47, and 49-52, and that these claims be allowed in due course. The Examiner is hereby cordially invited to contact Applicants’ undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Application No. 10/071,932
Response dated October 5, 2006
Reply to Office action of July 5, 2006

Date: October 5, 2006
Reg. No. 53,002

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Respectfully submitted,

A handwritten signature in black ink, appearing to read "William R. Haulbrook", written over a horizontal line.

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